EMC TEST REPORT

Project No.	LBE20100887	**Issue No.**	1
Applicant	**Name of organization**	**Samsung Electronics Co., Ltd.**	
	Address	416 Maetan 3-Dong, Yeongtong-Gu, Suwon-City, Gyeonggi-Do, Korea 443-742	
	Date of application	September 8, 2010	
EUT	**Type of device**	Class B digital devices and peripherals	
	Equipment authorization	**Cerification (Class II Permissive Change)** - A DoC approved USB card reader was configured with a certified Mono Laser MFP, and a clamp core was fitted with the cable of card reader to comply with FCC Rule.	
	FCC ID	**A3LSCX5635FN**	
	Kind of product	**Mono Laser MFP**	
	Model No.	**SCX-5635FN**	
		Variant Model No.	None
	Manufacturer	1) **Samsung Electronics Co., Ltd.** 259, Gongdan-Dong, Gumi-City, Gyeongsangbuk-Do, Korea 730-030 2) **Samsung Electronics (Shandong) Digital Printing Co., Ltd.** 264209, Samsung Road, Weihai Hi-Tech. IDZ, Shandong Province, P.R.China 3) **Weihai Shin Heung Digital Electronics Co., Ltd.** 98, Samsung Road, Weihai Hi-Tech. IDZ, Shandong Province, P.R.China 4) **Intops : Intops (Weihai) Electronics Co., Ltd.,** Keji Road-268-1 , Weihai Hi-Tech,Industries Development Zone , Shandong Province , CHINA	
Applied Standards		FCC Part 15, Subpart B / ANSI C63.4-2003	
Test Period		8 September 2010 ~ 10 September 2010	
Issue date		10 September 2010	

Test result : **Complied**

The equipment under test has found to be compliant with the applied standards.
(Refer to the attached test result for more detail.)

Tested by : Kyeong Dong Kim	**Reviewed by :** No Cheon Park

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SAMSUNG

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1. Summary of test results

1.1 Emission

The EUT has been tested according to the following specifications:

Applied	Test type	Applied standard	Result	Remarks
☒	Conducted Disturbance	FCC Part 15 Subpart B	Complied	Meets Class B Limit
☒	Radiated Disturbance		Complied	Meets Class B Limit

2. General Information

2.1 Test facility

The CS & Environment centre is located on Samsung Electronics Co., Ltd. at 416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, South Korea.
All testing are performed in Semi-anechoic chambers conforming to the site attenuation Characteristics defined by ANSI C63.4, CISPR 22, 16-1 and 16-2. and Shielded rooms.

The SEC EMC Laboratory is operated as testing laboratory in accordance with the requirements of ISO/IEC 17025:2005.

3. Test configuration

3.1 Test Peripherals

The following is a listing of the EUT and supporting peripherals utilized during testing.

Description	Model No.	Serial No.	Manufacturer	FCC ID and/or DoC
Mono Laser MFP	SCX-5635FN	-	Samsung	A3LSCX5635FN
Notebook PC	PP18L	29359007709	DELL	DoC
AC Adapter	HP-0Q065B	CN-0N2755-478 90-44I-0249	Hipro Electronics	For Notebook PC
Telephone	SP-F209	KKAY112943T	Samsung	-
Card Reader	SCR3310	-	SCM Microsystems	DoC
Clamp Core	BNF-12	-	FEELUX	N/A
Card Reader	-	050921695	Smartsystems	DoC
Headset	MH21	-	Labtec	-
USB Mouse	MOARUO	0816028776	Primax	DoC
USB Memory	DT Mini	-	Kingston	DoC

3.2 EUT operating mode (selected)

Operating Mode 1	Standby mode
Operating Mode 2	Duplex Copy Print mode
Operating Mode 3	Duplex USB Print mode
Operating Mode 4	Fax Transmit mode
Operating Mode 5	Scan to USB mode

- Customer selected operating mode(s) were investigated and reported to show compliance with the standard for the card reader which was approved in accordance with DoC procedure. To meet FCC Rule, a clamp core for the card reader was fitted upon customer's request and declaration. This will be supplied to customer, and installed by users.

3.3 Details of Sampling

- Customer selected, single unit.

3.4 Used cable description

The EUT is configured, installed, arranged and operated in a manner consistent with typical applications. Interface cables/loads/devices are connected to at least one of each type of interface port of the EUT, and where practical, each cable shall be terminated in a device typical of actual usage. The type(s) of interconnecting cables to be used and the interface port (of the EUT) to which these were connected;

Connected cable	Length [m]	Shielded [Y/N]	Note
Power	1.8	No	For EUT
Power	0.8	No	For Notebook PC
Tel line	3.0	No	EUT to telephone
Tel line	5.0	No	EUT to K/P system
Ethernet	5.0	No	EUT to HUB
Serial	1.2	No	Notebook PC to Card reader
USB	1.2	Yes	EUT to Card reader (a clamp core was fitted)
USB	1.8	Yes	Notebook PC to mouse
Headset	1.8	No	EUT to Headset

3.5 EUT Description

Item	Specification	Remarks
Processor	CHORUS3(360MHz)	-
Standard System memory	128MB DDR2 SDRAM (Option 256MB → MAX. 384MB)	-
Resolution	True 600x600dpi (Addressible 1200dpi support)	-
Copy Quality mode	Text : 600x300dpi(ADF) Mixed : 600x300dpi(ADF) Photo : 600x300dpi(ADF) ,600x600dpi (Platen)	-
Paper Handling	Paper Tray(standard) 250 Sheets 2nd Tray(optional) 250 Sheets Bypass Tray 50 Sheets	-
Power Rating	110~127 VAC, 7A, 50/60 Hz	-
Power Consumption	Power save mode : 1 Watts Printing mode: MAX. 600 Watts	-
Printer Language	GDI, PCL6, PCL5e PostScript Level3(Clone)	-
PC Interfaces	USB2.0, NW, FAX, WirelessLAN(option)	-
OS compatibility	MS Windows 98/2000/XP/NT/Me,MAC (English only, no status monitor, web download only) Linux: Red Hat 8.0~9.0, Fedora Core 1~3, Mandrake 9.0~10.2, SuSE 8.2~9.2. Windows 2003. Netware 4.x	-
Modes of Operation	USB Printing, ADF Scan, ADF Copy, 1200dpi Printing, Fax RX, Fax TX, Network Printing, Duplex Printing, Scan To USB	-
Intended Class for Emissions	Class B	-

3.6 Clock Frequencies

Kind of Clocks	Frequency[MHz]	Kind of Clocks	Frequency[MHz]
Main Source	12	Video	21.5625
CPU Internal	360	DDR2	166
USB Device	12	SCF	80
CCD(Mono copy)	8.57	CCD(Color copy)	10

3.7 Test configuration and condition

The system was configured for testing in typical fashion use. Cables were attached to each of the available I/O Ports. Where applicable, peripherals were attached to the I/O cables. Customer selected mode(s) selected were tested to show compliance with relevant standard for radiated disturbance below 1GHz and conducted disturbance. Radiated disturbances above 1GHz for operating mode(s) that have small margin of radiated disturbance below 1GHz were tested and reported.
Power source for the EUT operation was supplied by CVCF made by the Voltech Corp.

- **Testing Voltage : AC 115 V, 60 Hz**

3.8 Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus: (According to CISPR 16-4 and UKAS Lab 34.)

3.8.1 Emission

Test type		**Measurement uncertainty (C.L. 95 %, k = 2)**
Conducted disturbance	Mains Port	± 3.0 dB
Radiated disturbance	Horizontal	± 4.95 dB
	Vertical	± 4.99 dB

4. Results of individual test

4.1 Conducted disturbance

Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.

The EUT measured in accordance with the methods described in standards.

Limits for conducted disturbance at mains ports of class A

Frequency range Limits MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60

Note 1: 1 μV is regarded as 0 dB.
Note 2: If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector at the same frequency is unnecessary.
Note 3: The lower limit shall apply at the transition frequency.

Limits for conducted disturbance at the mains ports of class B

Frequency range Limits MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

Note 1: 1 μV is regarded as 0 dB.
Note 2: The limits shall decreases linearly with the logarithm of the frequency in the range 150 - 500 kHz.
Note 3: If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector is unnecessary.
Note 4: The lower limit shall apply at the transition frequency.

4.1.1 Test instrumentation

Test instrumentations used in the Conducted disturbance test were as follows:

Test instrumentation	Model name	Manufacturer	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
Measuring receiver	ESCI	R&S	100086	2009-11-19	12
Artificial mains network	ENV216	R&S	100117	2009-11-11	12
Artificial mains network	ESH3-Z5	R&S	100262	2009-09-18	12
Test software	EMC32	R&S	Ver 4.40.	N/A	N/A

4.1.2 Temperature and humidity condition

Test date	September 10, 2008	**Test engineer**	Kyeong Dong Kim	
Climate condition	**Ambient temperature**	23.5 ℃	**Relative humidity**	50 %
	Atmospheric pressure	100.7 kPa		
Test place	Shielded Room #1			

4.1.3 Photograph of Test Setup

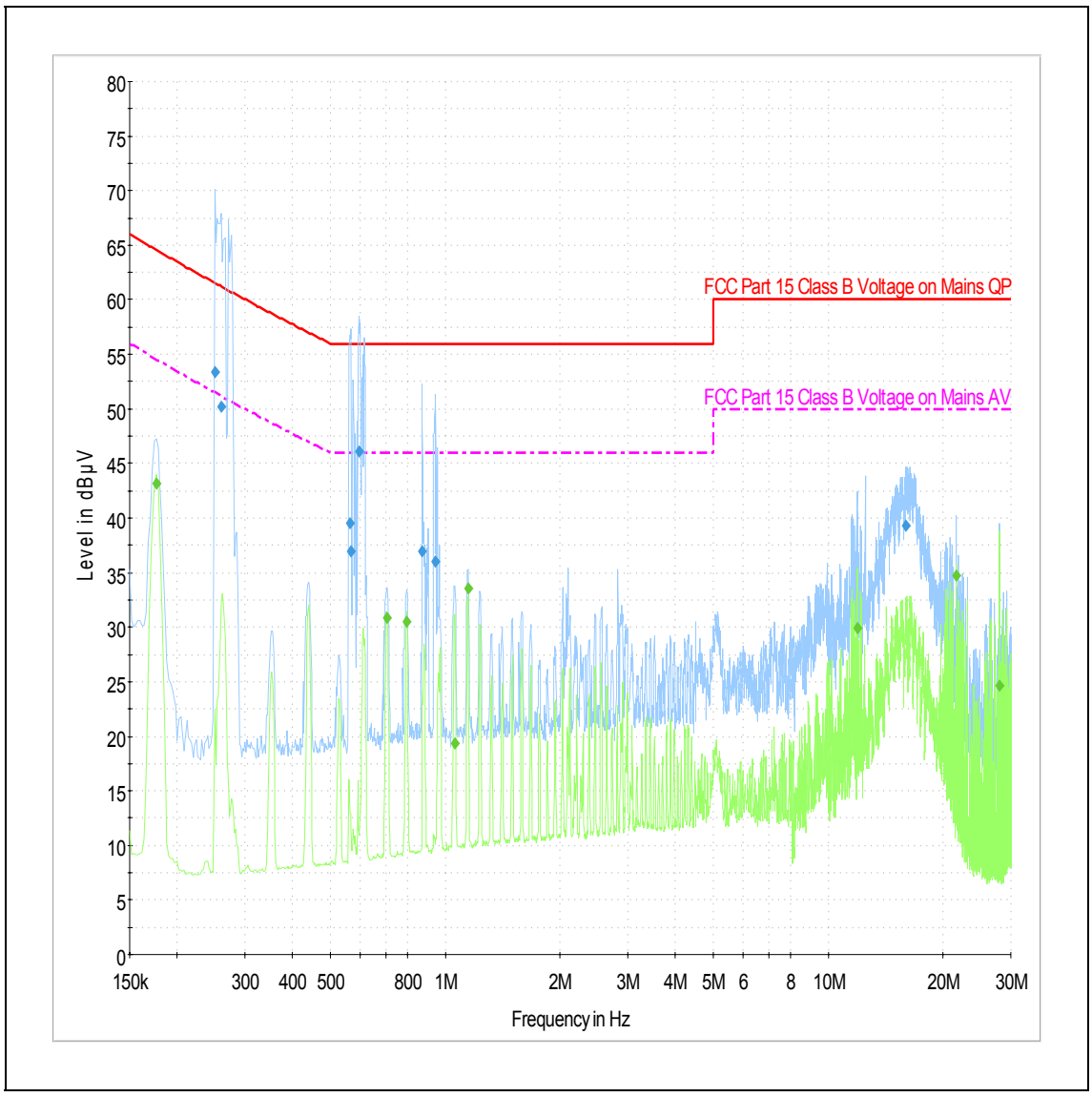
Front

Rear

4.1.4 Test results (mains port)

- **Operating Mode 1 : Standby mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

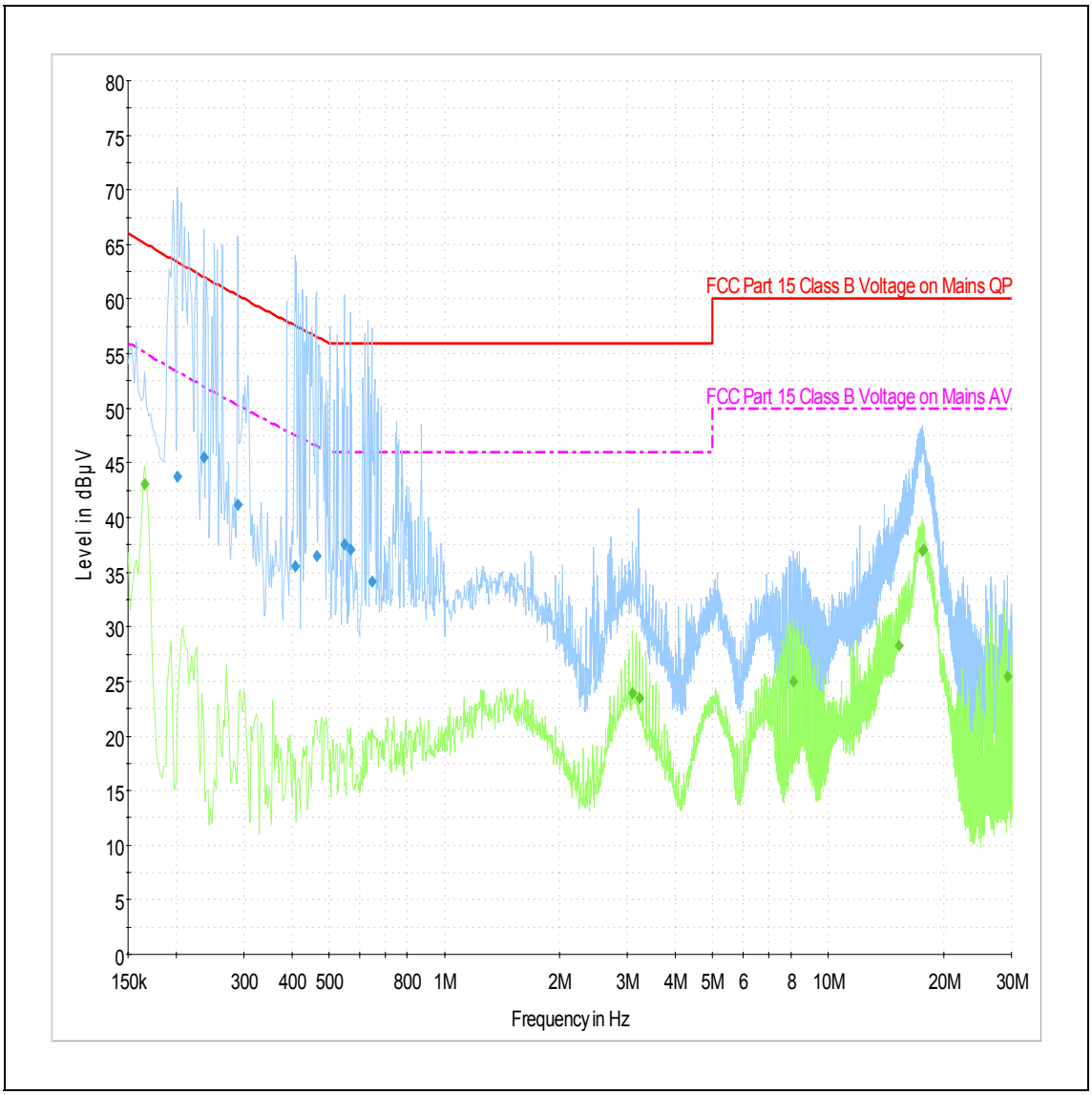
Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Quasi-Peak [dBuV]	Margin [dB]	Limit [dBuV]
0.250	L1	9.0	9.7	53.4	8.1	61.6
0.260	N	9.0	9.7	50.2	11.0	61.2
0.564	L1	9.0	9.7	39.5	16.5	56.0
0.568	L1	9.0	9.7	37.0	19.0	56.0
0.596	N	9.0	9.7	46.1	9.9	56.0
0.870	L1	9.0	9.7	37.0	19.0	56.0
0.944	N	9.0	9.7	36.0	20.0	56.0
15.924	L1	9.0	10.0	39.2	20.8	60.0

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Average [dBuV]	Margin [dB]	Limit [dBuV]
0.176	L1	9.0	9.7	43.2	11.4	54.6
0.704	L1	9.0	9.7	30.8	15.2	46.0
0.794	N	9.0	9.7	30.5	15.5	46.0
1.060	N	9.0	9.7	19.4	26.6	46.0
1.148	N	9.0	9.7	33.6	12.4	46.0
11.892	L1	9.0	9.9	29.9	20.1	50.0
21.664	N	9.0	10.1	34.7	15.3	50.0
28.004	N	9.0	10.2	24.6	25.4	50.0

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode 2 : Duplex Copy Print mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Quasi-Peak [dBuV]	Margin [dB]	Limit [dBuV]
0.202	L1	9.0	9.7	43.8	19.6	63.4
0.236	L1	9.0	9.7	45.5	16.6	62.0
0.290	N	9.0	9.7	41.2	19.1	60.3
0.408	L1	9.0	9.7	35.5	22.0	57.6
0.464	L1	9.0	9.7	36.5	20.1	56.6
0.548	L1	9.0	9.7	37.5	18.5	56.0
0.568	L1	9.0	9.7	37.1	18.9	56.0
0.646	L1	9.0	9.7	34.2	21.8	56.0

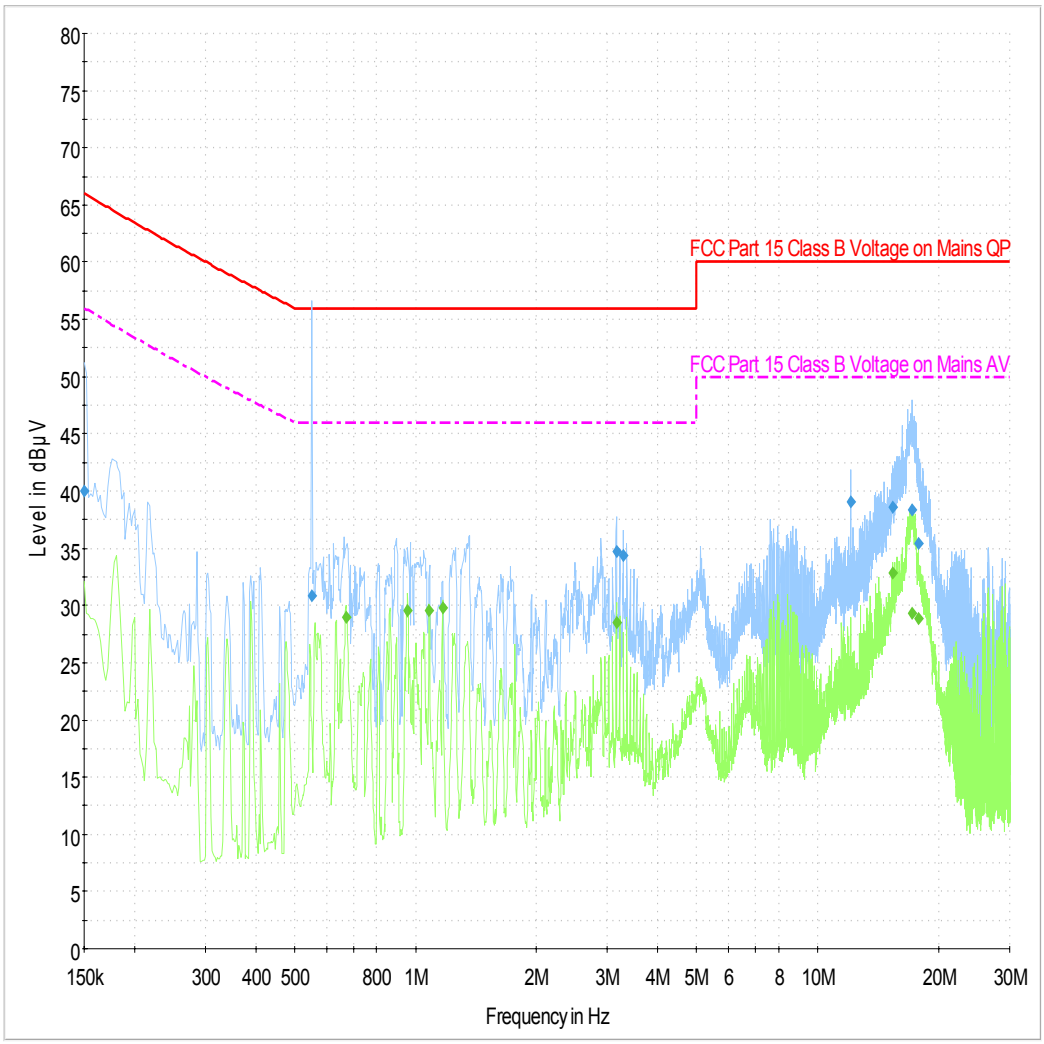
Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Average [dBuV]	Margin [dB]	Limit [dBuV]
0.166	L1	9.0	9.7	43.0	12.1	55.1
3.088	L1	9.0	9.7	23.9	22.1	46.0
3.220	L1	9.0	9.8	23.5	22.5	46.0
8.084	L1	9.0	9.8	25.0	25.0	50.0
15.248	L1	9.0	9.9	28.3	21.7	50.0
17.608	N	9.0	10.0	36.9	13.1	50.0
17.664	N	9.0	10.0	37.1	12.9	50.0
29.236	L1	9.0	10.1	25.5	24.5	50.0

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) + Factor (LISN Insertion Loss + Cable Loss)

Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode 3 : Duplex USB Print mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

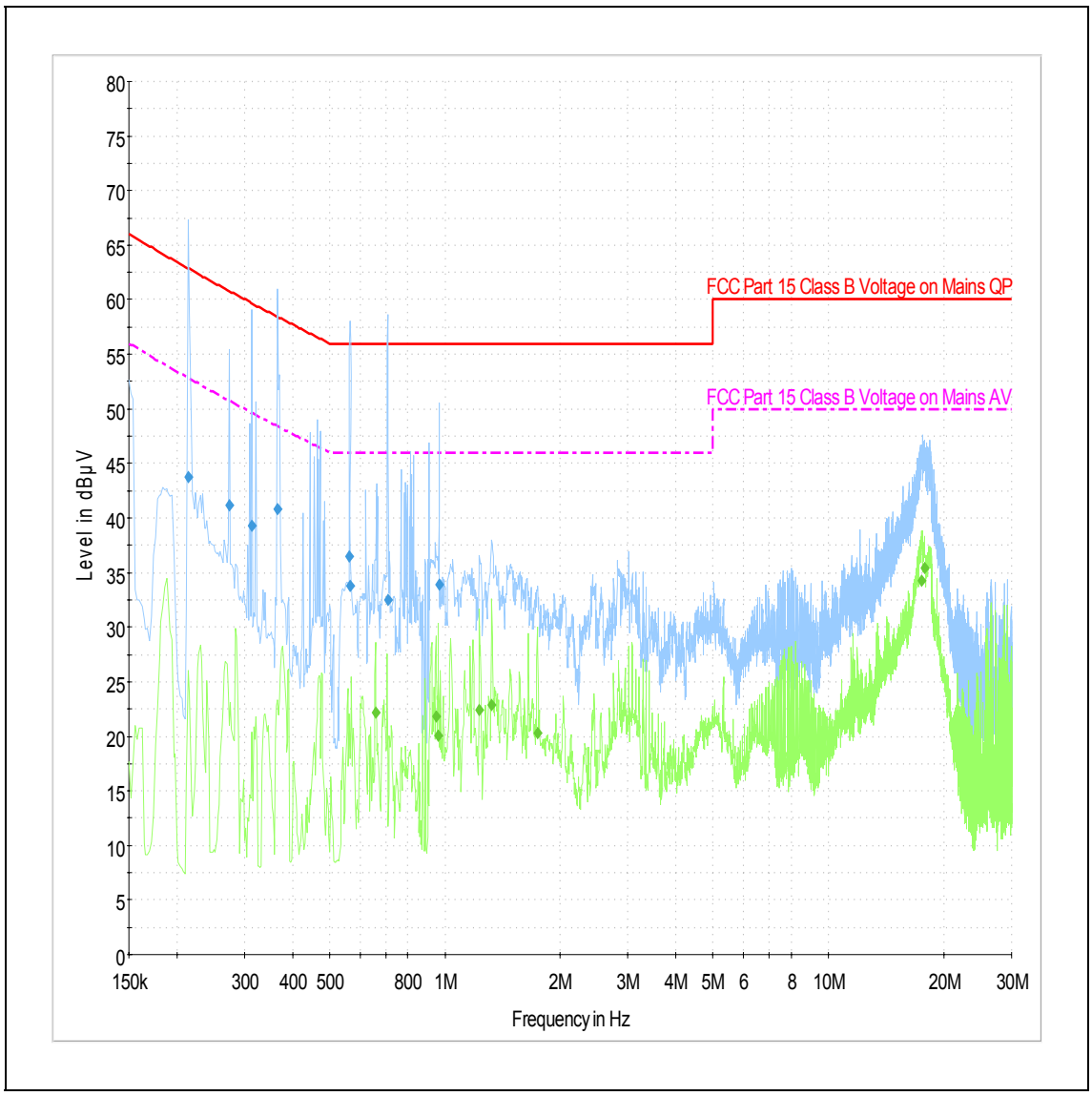
Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Quasi-Peak [dBuV]	Margin [dB]	Limit [dBuV]
0.150	L1	9.0	9.7	40.0	26.0	66.0
0.552	L1	9.0	9.7	30.9	25.1	56.0
3.156	N	9.0	9.7	34.8	21.2	56.0
3.288	N	9.0	9.7	34.4	21.6	56.0
12.060	N	9.0	9.9	39.0	21.0	60.0
15.308	L1	9.0	9.9	38.6	21.4	60.0
17.156	L1	9.0	10.0	38.4	21.6	60.0
17.800	L1	9.0	10.0	35.5	24.5	60.0

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Average [dBuV]	Margin [dB]	Limit [dBuV]
0.672	N	9.0	9.7	29.0	17.0	46.0
0.956	N	9.0	9.7	29.6	16.4	46.0
1.080	N	9.0	9.7	29.6	16.4	46.0
1.168	N	9.0	9.7	29.8	16.2	46.0
3.156	N	9.0	9.7	28.5	17.5	46.0
15.312	L1	9.0	9.9	32.8	17.2	50.0
17.160	L1	9.0	10.0	29.4	20.6	50.0
17.808	L1	9.0	10.0	28.9	21.1	50.0

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode 4 : FAX Transmit mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

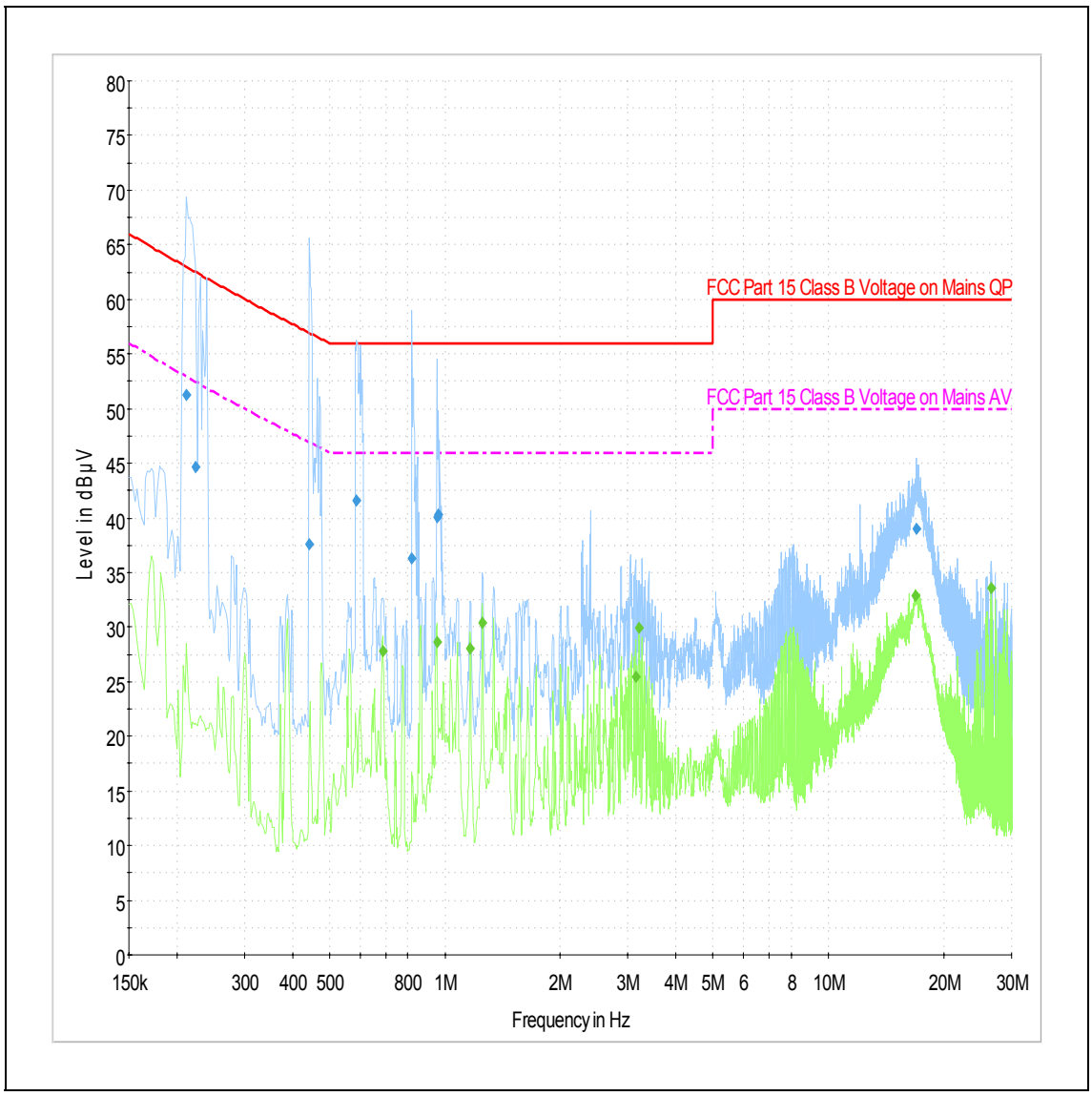
Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Quasi-Peak [dBuV]	Margin [dB]	Limit [dBuV]
0.214	N	9.0	9.7	43.7	19.1	62.9
0.274	N	9.0	9.7	41.1	19.7	60.8
0.314	N	9.0	9.7	39.3	20.3	59.7
0.366	L1	9.0	9.7	40.8	17.6	58.4
0.564	N	9.0	9.7	36.5	19.5	56.0
0.566	N	9.0	9.7	33.7	22.3	56.0
0.710	L1	9.0	9.7	32.5	23.5	56.0
0.966	N	9.0	9.7	33.9	22.1	56.0

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Average [dBuV]	Margin [dB]	Limit [dBuV]
0.658	L1	9.0	9.7	22.2	23.8	46.0
0.946	L1	9.0	9.7	21.8	24.2	46.0
0.960	L1	9.0	9.7	20.0	26.0	46.0
1.228	N	9.0	9.7	22.4	23.6	46.0
1.324	N	9.0	9.7	22.9	23.1	46.0
1.740	N	9.0	9.7	20.3	25.7	46.0
17.476	N	9.0	10.0	34.2	15.8	50.0
17.792	N	9.0	10.0	35.4	14.6	50.0

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

- **Operating Mode 5 : Scan to USB mode**

Test Graph



Note) Two graphs measured for both Live(L1) and Neutral(N) of the LISN are combined into one graph.

Test Results (Quasi-Peak and Average)

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Quasi-Peak [dBuV]	Margin [dB]	Limit [dBuV]
0.212	N	9.0	9.7	51.3	11.6	63.0
0.224	N	9.0	9.7	44.6	17.9	62.5
0.442	L1	9.0	9.7	37.6	29.4	57.0
0.588	N	9.0	9.7	41.6	14.4	56.0
0.820	L1	9.0	9.7	36.3	19.7	56.0
0.952	N	9.0	9.7	40.1	15.9	56.0
0.962	N	9.0	9.7	40.3	15.7	56.0
16.964	L1	9.0	10.0	39.0	21.0	60.0

Frequency [MHz]	Line	Bandwidth [kHz]	Factor [dB]	Average [dBuV]	Margin [dB]	Limit [dBuV]
0.688	L1	9.0	9.7	27.8	18.2	46.0
0.952	N	9.0	9.7	28.7	17.3	46.0
1.164	N	9.0	9.7	28.0	18.0	46.0
1.252	N	9.0	9.7	30.4	15.6	46.0
3.136	N	9.0	9.7	25.4	20.6	46.0
3.200	N	9.0	9.7	29.9	16.1	46.0
16.820	L1	9.0	10.0	32.9	17.1	50.0
26.608	L1	9.0	10.1	33.6	16.4	50.0

Note) Level (Quasi-Peak and/or Average) = Meter Reading(Quasi-Peak and/or Average) +
Factor (LISN Insertion Loss + Cable Loss)
Margin = Limit – Level (Quasi-Peak and/or Average)

4.2 Radiated disturbance

Of those disturbances above (*L* - 20dB), where *L* is the limit level in logarithmic units, record at least the disturbance levels and the frequencies of the six highest disturbances.
The following data lists the significant emission frequencies, measured levels, correction factors (for antenna and cables), orientation of table, polarization and height of antenna, the corrected reading, the limit, and the amount of margin. All measurements were taken utilizing quasi-peak detection unless stated otherwise.
Measurements were performed at an antenna to EUT distance of 10 meters and elevated between 1 and 4 meters. Both vertical and horizontal antenna polarizations were measured.

Limits for radiated disturbance of ITE at a measuring distance of 10 m

Frequency range Limits MHz	Quasi-peak Limits dB dB(μV/m)	
	Class A	Class B
30 to 230	40	30
230 to 1000	47	37
Note 1: The lower limit shall apply at the transition frequency. Note 2: Additional provisions may be required for cases where interference occurs. Note 3: 1 μV/m is regarded as 0 dB.		

Peak measurements were made over the changeable frequency range 1GHz to 40GHz or 5th in accordance with internal maximum operating frequency at a measurement distance of 3m for the following antenna and turntable arrangements:

Antenna Height (Cm)	Antenna Polarisation	Turntable position (degrees)
100	Horizontal, Vertical	Continuous

Limits for above 1GHz radiated disturbance of ITE at a measuring distance of 3 m

Class	Limits - dB(μV/m)	
	Peak	Average
A	80	60
B	74	54
Average limit 500, 20 log 500 = 53.979 dB ≒ 54 dB		

Antenna height was adjusted to 100 cm to be parallel from EUT to antenna centre.
Measurements within 20 dB of the limit were then maximized by adjusting turntable position.
Final measurements were made using a average detector.

Results checked manually; and points close to the limit line were re-measured.

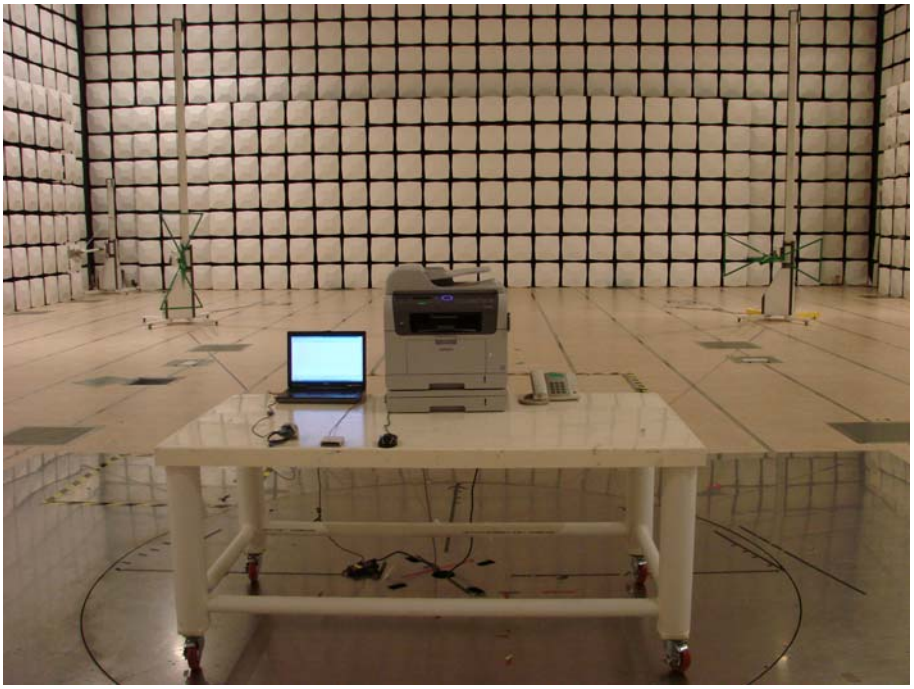
4.2.1 Test instrumentation

Test instrumentation	Manufacturer	Model Name	Serial or Firmware (No./Ver.)	Calibration	
				Date	Interval (Month)
BILOG ANTENNA	SCHAFFNER	CBL6112D	22602	2010-04-21	24
BILOG ANTENNA	SCHAFFNER	CBL6112D	22604	2010-04-21	24
HORN ANTENNA	R&S	HF907	100016	2009-04-27	24
EMI TEST RECEIVER	R&S	ESIB-26	100147	2010-08-17	12
EMI TEST RECEIVER	R&S	ESIB-26	100288	2010-06-04	12
AMPLIFIER	SONOMA	310N	185861	2010-01-28	12
AMPLIFIER	SONOMA	310N	251676	2010-01-28	12
Amplifier	TOYO	TPA0108-40	0433	N/A	N/A
RF Selector	TOYO	NS4900	-	N/A	N/A
Ant. Mast	inn-co	MA4000	-	N/A	N/A
Ant. Mast	inn-co	MA4000	-	N/A	N/A
Ant. Mast	inn-co	MA2000	-	N/A	N/A
Mast Controller	inn-co	CO2000	CO2000/189/9 271204/L	N/A	N/A
Test Software	TOYO	EP5/RE	Ver 3.1.20	N/A	N/A

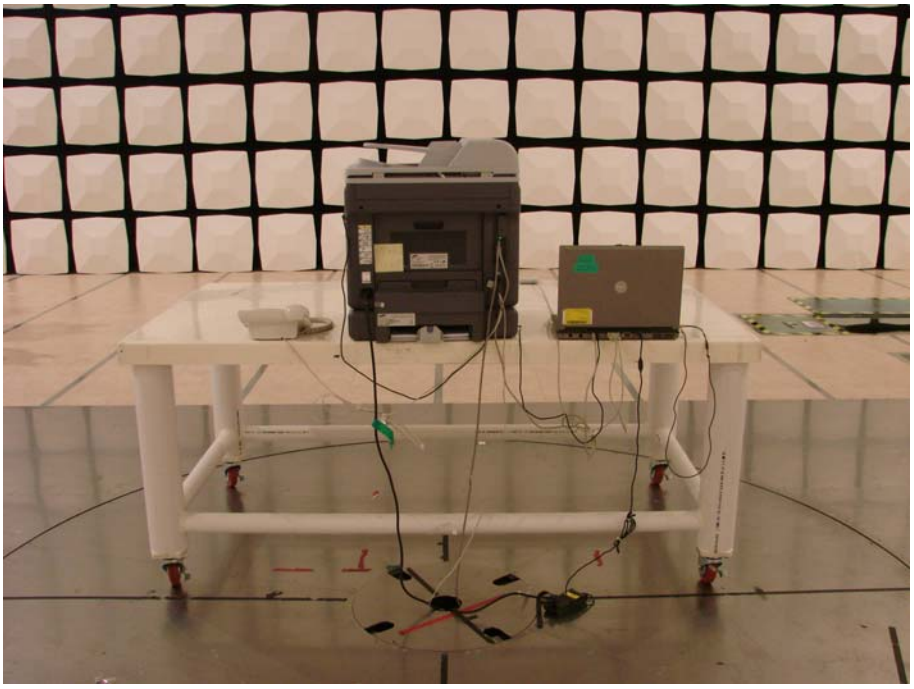
4.2.2 Temperature and humidity condition

Test date	September 08, 2008	**Test engineer**	Kyeong Dong Kim	
Climate condition	**Ambient temperature**	23.2 ℃	**Relative humidity**	38%
	Atmospheric pressure	100.9 kPa		
Test place	Semi-Anechoic Chamber			

4.2.3 Photograph of Test setup



Front

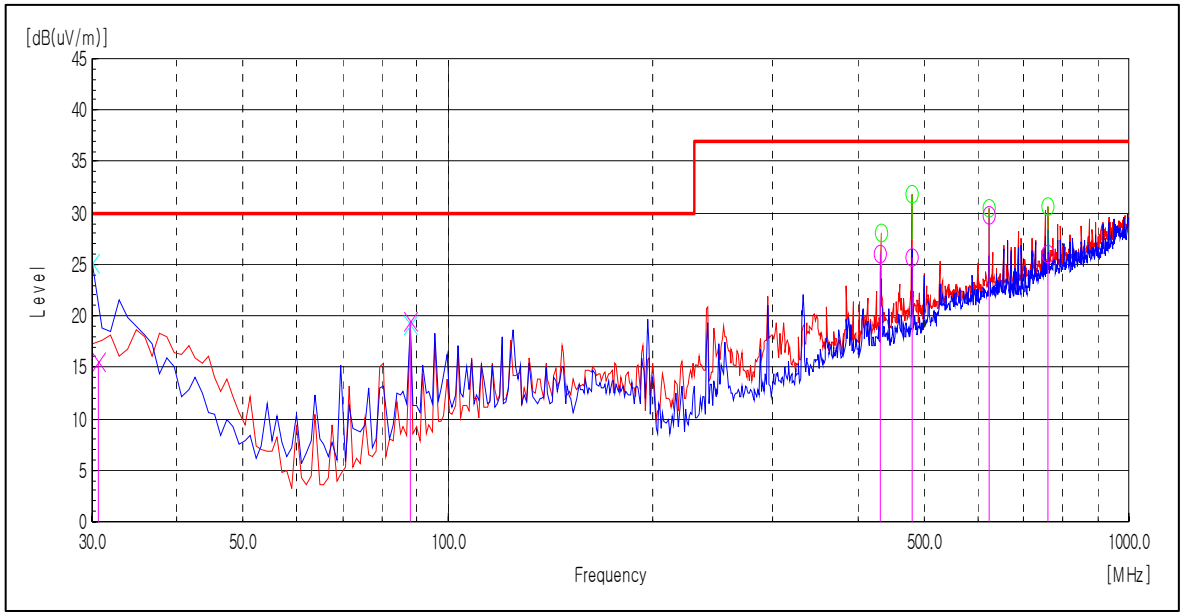


Rear

4.2.4 Test results (30 MHz ~ 1 GHz)

- **Operating Mode 1 : Stand by mode**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
30.68	V	26.3	-10.7	15.6	30	14.4	105	257.3
88.01	V	41.4	-21.8	19.6	30	10.4	152	93
432.04	H	36.1	-10.1	26.0	37	11.0	133	156.3
479.98	H	34.6	-9.0	25.6	37	11.4	400	139.6
624.06	H	35.7	-6.0	29.7	37	7.3	129	184.9
761.81	H	30.2	-4.2	26.0	37	11.0	283	280.1

Note) Receiving antenna polarization : Horizontal and/or Vertical

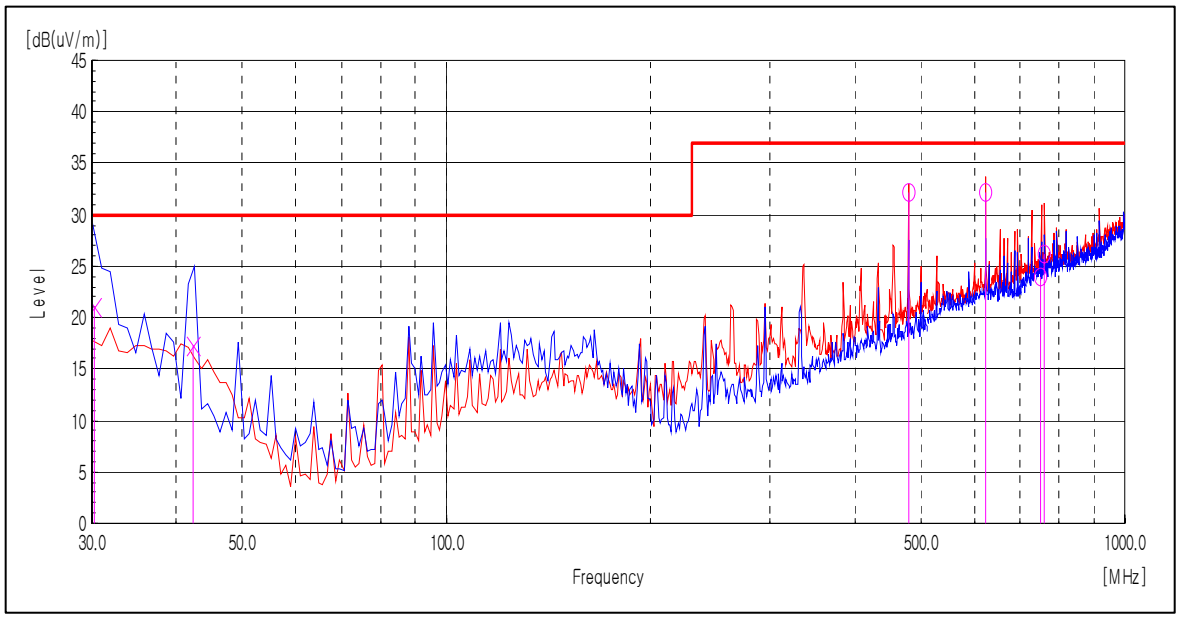
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode 2 : Duplex Copy Print mode**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
30.28	V	31.4	-10.3	21.1	30	8.9	201	344
42.32	V	36.9	-19.7	17.2	30	12.8	202	24
480.03	H	41.2	-9.0	32.2	37	4.8	157	163
624.03	H	38.2	-6.0	32.2	37	4.8	124	185
752.03	H	28.2	-4.3	23.9	37	13.1	100	334
761.82	H	30.4	-4.2	26.2	37	10.8	142	28

Note) Receiving antenna polarization : Horizontal and/or Vertical

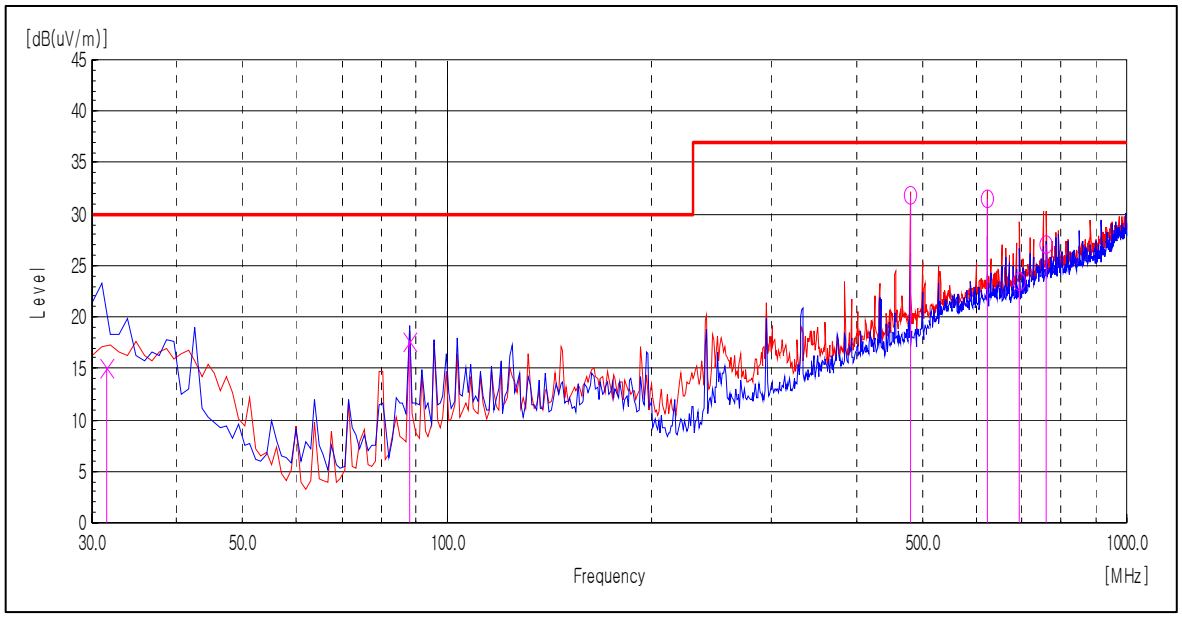
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode 3 : Duplex USB Print mode**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
31.46	V	26.4	-11.4	15.0	30	15.0	101	8.8
88.01	V	39.4	-21.8	17.6	30	12.4	158	31.6
479.97	H	40.8	-9.0	31.8	37	5.2	138	329.5
624.01	H	37.5	-6.0	31.5	37	5.5	175	344.7
693.82	H	29.2	-5.8	23.4	37	13.6	303	166.4
761.85	H	31.3	-4.2	27.1	37	9.9	148	179

Note) Receiving antenna polarization : Horizontal and/or Vertical

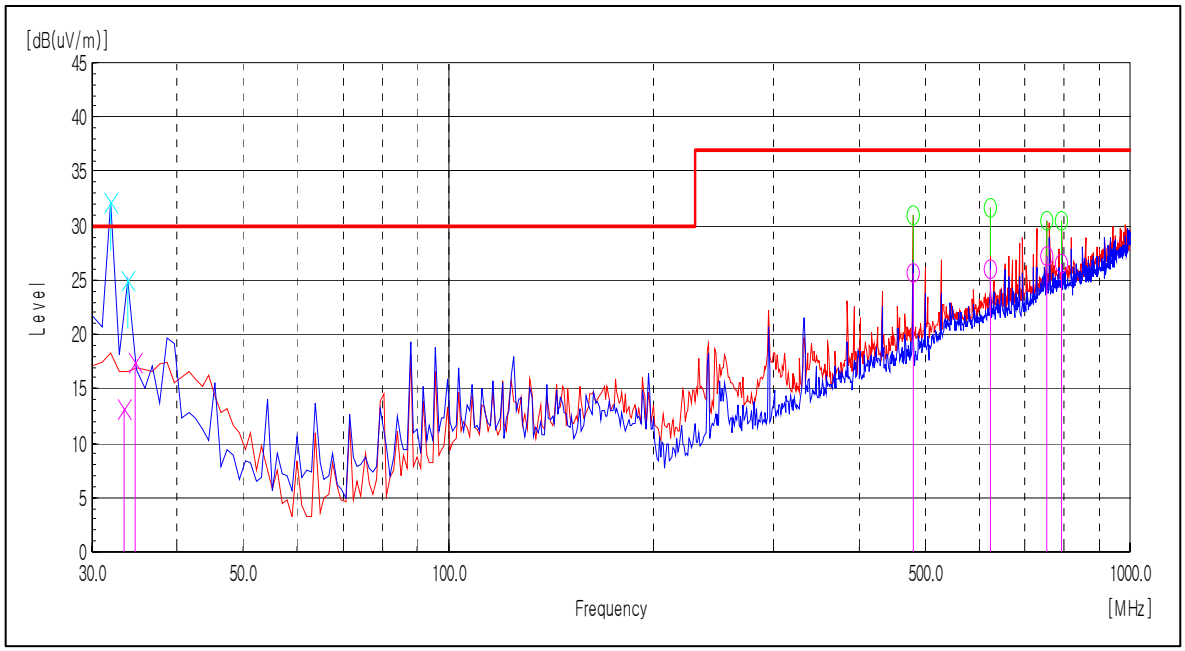
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode 4 : FAX Transmit mode**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
33.46	V	26.6	-13.4	13.2	30	16.8	201	334.9
34.63	V	31.9	-14.5	17.4	30	12.6	102	30
480.03	H	34.6	-9.0	25.6	37	11.4	142	329.8
624.01	H	32.0	-6.0	26.0	37	11.0	128	356.9
753.66	H	31.4	-4.2	27.2	37	9.8	203	254.9
794.62	H	30.4	-3.9	26.5	37	10.5	151	154.8

Note) Receiving antenna polarization : Horizontal and/or Vertical

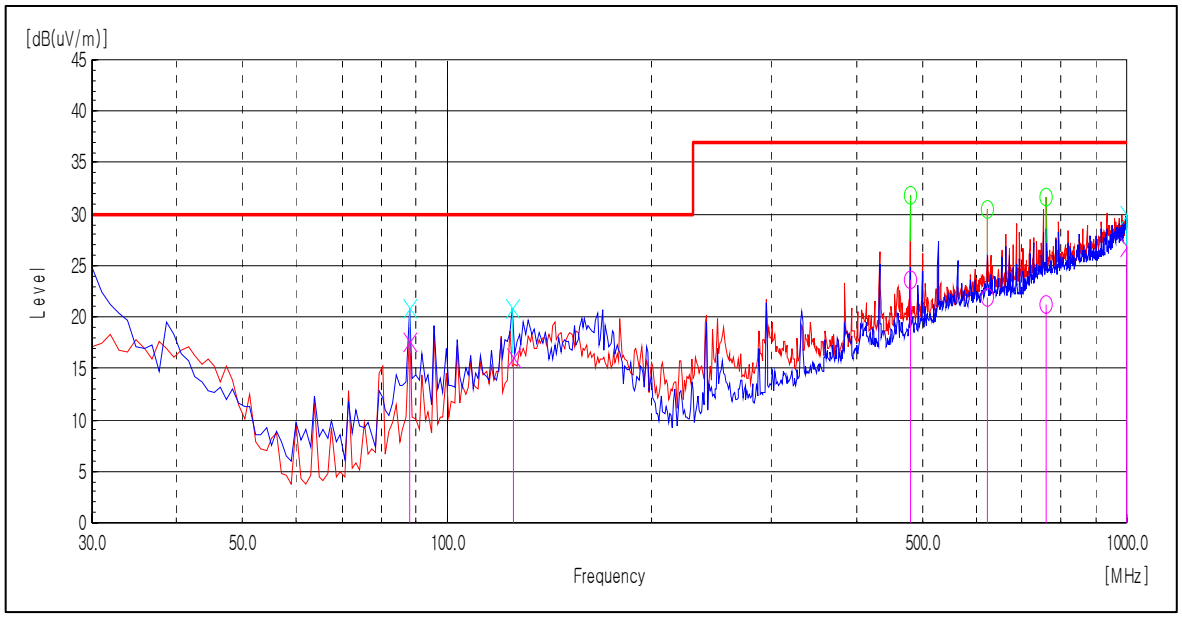
Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

- **Operating Mode 5 : Scan to USB mode**

Test Graph and Results



Frequency [MHz]	(P)	Reading QP [dB(uV)]	Factor [dB(1/m)]	Level QP [dB(uV/m)]	Limit [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
88.02	V	39.4	-21.8	17.6	30	12.4	165	30
125.03	V	33.7	-17.6	16.1	30	13.9	198	336
480.02	H	32.6	-9.0	23.6	37	13.4	129	333
624.98	H	27.9	-6.0	21.9	37	15.1	154	10
761.94	H	25.4	-4.2	21.2	37	15.8	142	29
999.02	V	27.1	-0.3	26.8	37	10.2	296	30

Note) Receiving antenna polarization : Horizontal and/or Vertical

Test Distance : 10m, Antenna Height : 1 to 4 meters

Level QP(Quasi-Peak) = Reading QP + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin QP(Quasi-Peak) = Limit – Level QP

4.2.5 Test results (1 GHz ~ 2 GHz)

- **Operating Mode 2 : Duplex Copy Print mode**

Test Results

Peak results

Frequency [MHz]	(P)	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1330.66	V	59.4	-12.6	46.8	74	27.2	100	24
1599.20	V	55.4	-10.1	45.3	74	28.7	100	40
1659.32	H	55.9	-9.6	46.3	74	27.7	100	240
1665.33	V	61.5	-9.5	52.0	74	22.0	100	40.1

- **Operating Mode 3 : Duplex USB Print mode**

Test Results

Peak results

Frequency [MHz]	(P)	Reading PK [dB(uV)]	Factor [dB(1/m)]	Level PK [dB(uV/m)]	Limit [dB(uV/m)]	Margin PK [dB]	Height [cm]	Angle [deg]
1128.26	H	57.6	-14.3	43.3	74	30.7	100	31
1186.37	H	55.2	-13.9	41.3	74	32.7	100	80
1328.66	V	56.0	-12.6	43.4	74	30.6	100	34
1661.32	V	62.3	-9.5	52.8	74	21.2	100	51.8

Note1) Representative operating mode having minimum margin below 1GHz were selected for radiated emission measurement above 1GHz, and any emissions that do NOT exceed Average limit were not tested with average detector mode.

Note2) Receiving antenna polarization : Horizontal and Vertical

Test Distance : 3m, Antenna Height : 1 meters

Level PK(Peak) = Reading PK(Peak) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin PK(Peak) = Limit – Level PK(Peak)

Level AVG(Average) = Reading AVG(Average) + Factor(Antenna Factor + Cable Loss - Amp. Gain)

Margin AVG(Average) = Limit – Level AGE(Average)

Appendix – EUT photography

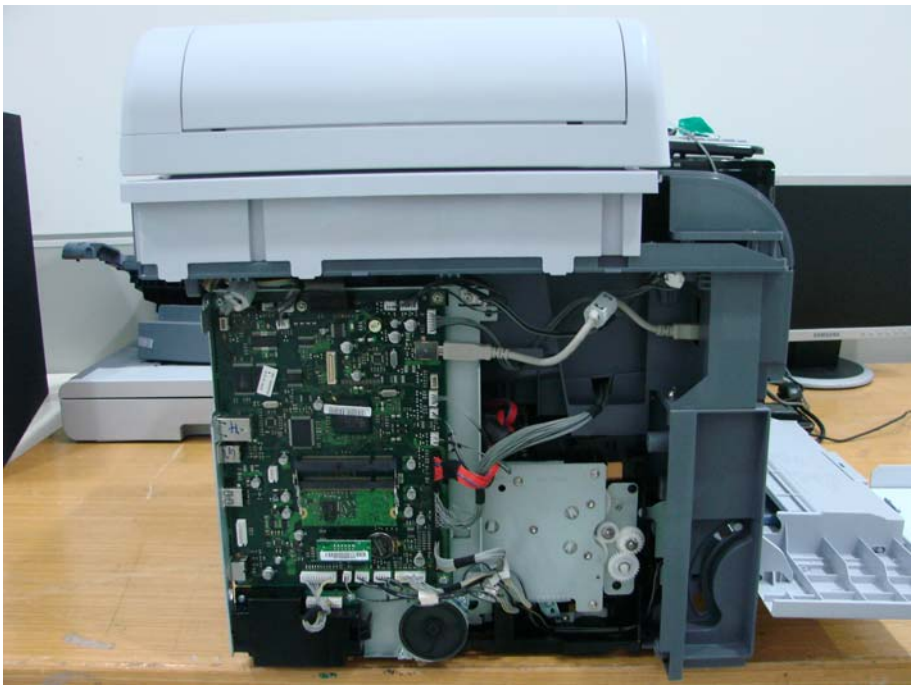
Front View

Rear View

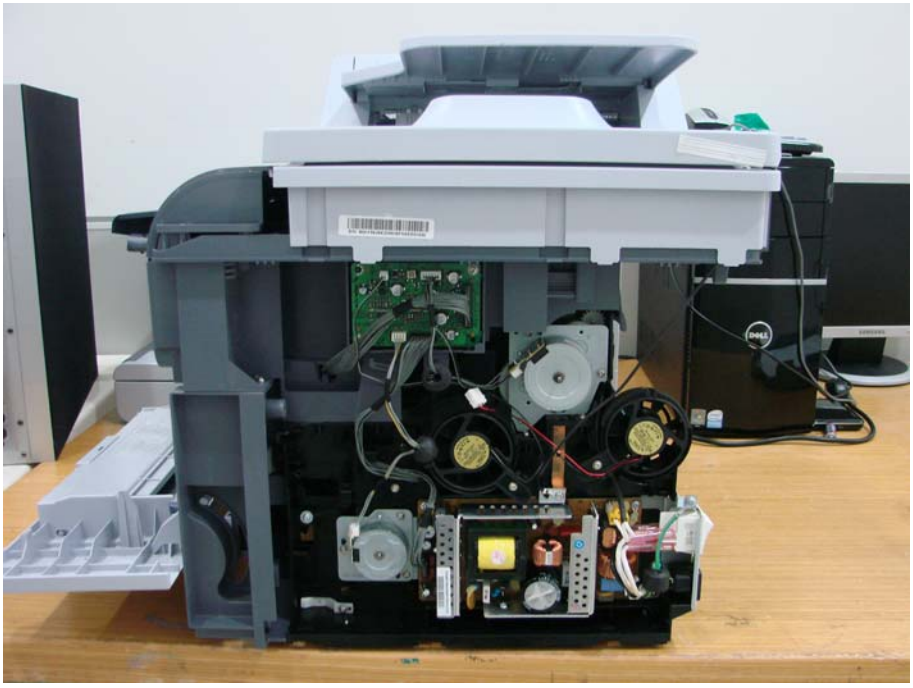
Left View

Right View

Internal View-1



Internal View-2

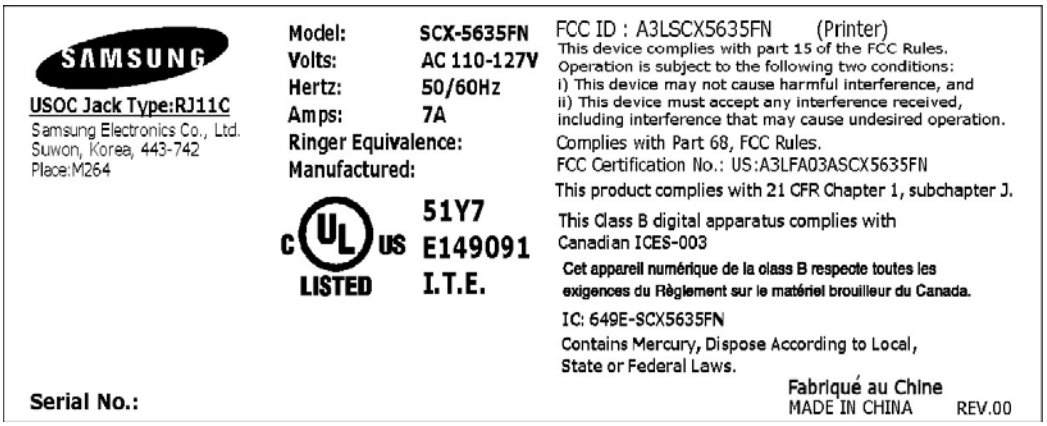


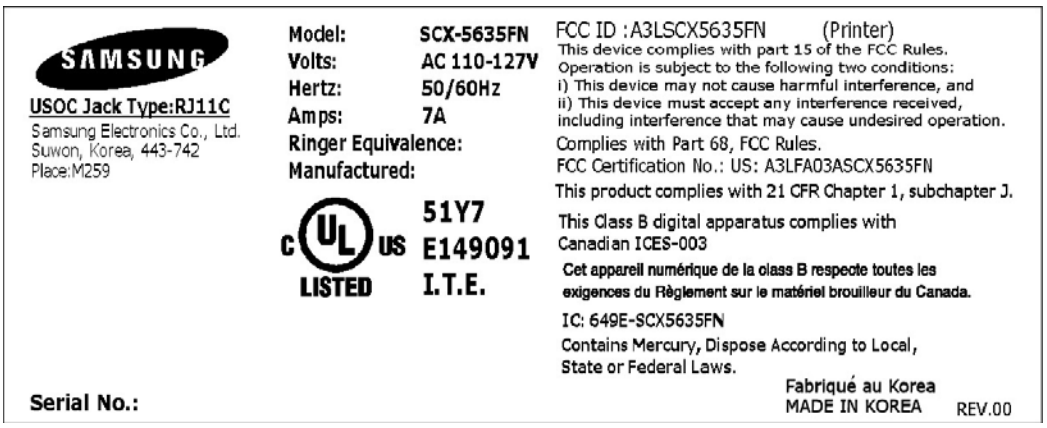
Internal View-3

Card Reader with a clamp core

A Clamp core

Label Location





Rating Label